

In the claims:

Following is a complete set of claims as amended with this Response.

1. (Previously Presented) A method of annotating video data comprising:
accepting video frame data from a video source, the video frame data
corresponding to a sequence of video frames;
gathering video information distinct from and describing the video frame data
and storing the video information;
comparing video information describing a current video frame with the stored
video information ;
generating differential information based on the comparing; and
inserting the differential information as annotation frames between frames of the
sequence of video frames, the annotation frames being separate and distinct from the
video frames.
2. (Original) The method of claim 1, wherein the video information
comprises camera geometry information.
3. (Original) The method of claim 1, wherein the video information
comprises camera pose information.
4. (Original) The method of claim 1, wherein the video information
comprises source identification/description/illumination information.
5. (Original) The method of claim 1, wherein the video frame data comprises
images obtained from a camera.
- 6-7. (Canceled)
8. (Previously Presented) The method of claim 1, wherein comparing
comprises comparing video information describing a current video frame with camera
geometry information, camera pose information and source
identification/description/illumination information of the video frame data.
9. (Canceled)

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10. (Previously Presented) The method of claim 1, wherein storing comprises appending the differential information to the video frame data.

11. (Previously Presented) An apparatus comprising:

a video source to generate video frame data;

a collector configured to collect video information distinct from and describing the video frame data to be associated with the video frame data and to store the video information;

a comparator to compare video information describing a current video frame with the stored video information;

a differential generator to determine differential information based on the comparison; and

an annotator coupled to the differential generator to annotate the video frame data with the differential information, the differential information being inserted as annotation frames between frames of the video frame data, the annotation frames being separate and distinct from the frames of the video frame data.

12. (Original) The apparatus of claim 11, wherein the video information comprises one or more of: camera geometry; camera pose information; and source identification/description/illumination information.

13. (Previously Presented) The apparatus of claim 12, further comprising calibration software configured to generate the camera geometry information for the video frame data as the video frame data is being gathered by the video source and to provide the generated camera geometry information to the collector.

14. (Previously Presented) The apparatus of claim 12, further comprising pose estimation software configured to generate the camera pose information for the video frame data as the video frame data is being gathered by the video source and provide the generated camera pose information to the collector.

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15. (Previously Presented) The apparatus of claim 12, further comprising an encoder coupled to the differential generator configured to encode the differential information as an input to the annotator.

16. (Previously Presented) The apparatus of claim 15, wherein the encoder forwards a current state of the video information to a state storage device coupled to the encoder.

17-19. (Canceled)

20. (Previously Presented) The medium of claim 29, wherein the video information is camera geometry information.

21. (Previously Presented) The medium of claim 29, wherein the video information is camera pose information.

22. (Previously Presented) The medium of claim 29, wherein the video information is source identification/description/illumination information.

23. (Canceled)

24. (Currently Amended) The medium of claim 29 [19], wherein the video source is a video capture device.

25-27. (Canceled)

28. (Previously Presented) The medium of claim 29 wherein the instructions for storing comprise instructions which, when executed by the machine, cause the machine to perform further operations comprising appending the differential information to the video frame data.

29. (Previously Presented) A machine-readable medium having stored thereon data representing instructions which, when executed by a machine, cause the machine to perform operations comprising:

accepting video frame data from a video source, the video frame data corresponding to a sequence of video frames;

gathering video information distinct from and describing the video frame data and storing the video information;

comparing video information describing a current video frame with the stored video information ;

generating differential information based on the comparing; and

inserting the differential information as annotation frames between frames of the sequence of video frames, the annotation frames being separate and distinct from the video frames.

30-36. (Cancelled)

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